

- 1 33. The method of any of claims 3, 12, 17, or 24, wherein the agent causes release of
2 Ca^{++} from the endoplasmic reticulum.
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- 4 34. The method of any of claims 3, 12, 17, or 24, wherein the agent stimulates or
5 increases IP_3 receptor activity.
6
- 7 35. The method of any of claims 3, 12, 17, or 24, wherein the agent decreases or
8 inhibits calnexin functional activity
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- 10 36. The method of any of claims 3, 12, 17, or 24, wherein the agent increases or
11 activates ryanodine receptor activity
12
- 13 37. The method of any of claims 3, 12, 17, or 24, wherein the agent comprises
14 thapsigargin or a derivative thereof.
15
- 16 38. The method of any of claims 3, 12, 17, or 24, wherein the agent comprises DBHQ
17 or a derivative thereof.
18
- 19 39. The method of any of claims 3, 12, 17, or 24, wherein the agent comprises
20 cyclopiazonic acid or a derivative thereof or wherein the agent comprises halothane or a
21 derivative thereof.
22
- 23 40. The method of any of claims 3, 12, 17, or 24, wherein the agent permits release
24 of mis-assembled or mis-folded proteins from the endoplasmic reticulum.
25
- 26 41. The method of any of claims 3, 12, 17, or 24, wherein the agent is an
27 oligonucleotide which is antisense to a protein selected from the group consisting of
28 UDP glucose:glycoprotein glycosyl transferase, calnexin and Ca^{++} ATPase.
29
- 30 42. A method of treating any disease or clinical condition, comprising
31 administering an agent that permits the release of proteins from the endoplasmic
32 reticulum, wherein the agent increases or activates ryanodine receptor activity.
33
- 34 43. The method of claim 42, wherein the disease is selected from the list consisting of:

Cystic Fibrosis, Chronic Obstructive Pulmonary Disease, Paroxysmal Nocturnal Hemoglobinuria, Familial Hypercholesterolemia, Tay-Sachs Disease, viral diseases, neoplastic diseases, Hereditary Myeloperoxidase Deficiency, Congenital Insulin Resistance, Rhinosinusitis, Nephrogenic Diabetes Insipidus, Hemochromatosis, Gitelman's Syndrome, and Cystinuria.

44. A method of releasing a mis-assembled or mis-folded glycoprotein from the endoplasmic reticulum of a cell comprising the step of administering an agent that decreases or inhibits the functional activity of UDP glucose:glycoprotein glycosyl transferase.

45. A method of releasing a mis-assembled or mis-folded glycoprotein from the endoplasmic reticulum of a cell comprising the step of administering an agent that decreases or inhibits activity of the endoplasmic reticulum Ca^{++} ATPase.

46. A method of releasing a mis-assembled or mis-folded glycoprotein from the endoplasmic reticulum of a cell comprising the step of administering an agent that lowers the concentration of Ca^{++} in the endoplasmic reticulum.

47. A method of releasing a mis-assembled or mis-folded glycoprotein from the endoplasmic reticulum of a cell comprising the step of administering an agent that decreases or inhibits calnexin functional activity.

48. A method of increasing the permeability of the apical surfaces of airway epithelial cells to a chloride ion comprising the step of administering an agent that decreases or inhibits the intracellular retention of mis-assembled or mis-folded glycoproteins.

49. A method of increasing the permeability of the apical surfaces of airway epithelial cells to a chloride ion comprising the step of administering an agent that decreases or inhibits the activity of UDP glucose:glycoprotein glycosyl transferase.

50. A method of increasing the permeability of the apical surfaces of airway epithelial cells to a chloride ion comprising the step of administering an agent that decreases or inhibits activity of the endoplasmic reticulum Ca^{++} ATPase.

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2 51. A method of increasing the permeability of the apical surfaces of airway epithelial
3 cells to a chloride ion comprising the step of administering an agent that lowers the
4 concentration of Ca^{++} in the endoplasmic reticulum.

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6 52. A method of increasing the permeability of the apical surfaces of airway epithelial
7 cells to a chloride ion comprising the step of administering an agent that decreases or
8 inhibits calnexin functional activity.

9
10 53. A method of screening candidate compounds to identify an agent that inhibits
11 endoplasmic reticulum-associated retention or degradation of a mis-assembled or mis-
12 folded glycoprotein, wherein the method comprises the steps of:

13 a). treating a cell exhibiting intracellular retention of a mis-assembled or
14 mis-folded glycoprotein in the endoplasmic reticulum with the candidate compound;
15 and

16 b). determining whether the mis-assembled or mis-folded glycoprotein is
17 released from the endoplasmic reticulum, thereby identifying the candidate compound
18 as an agent that causes the release of a malformed mis-folded glycoprotein from the
19 endoplasmic reticulum.

20
21 54. A method of screening candidate compounds to identify an agent that inhibits the
22 functional activity of UDP glucose:glycoprotein glycosyl transferase, wherein the
23 method comprises the steps of:

24 a). treating a cell exhibiting intracellular retention of a mis-assembled or
25 mis-folded glycoprotein in the endoplasmic reticulum with the candidate compound;
26 and

27 b). determining whether the mis-assembled or mis-folded glycoprotein is
28 released from the endoplasmic reticulum, thereby identifying the candidate compound
29 as an agent that causes the release of a mis-assembled or mis-folded glycoprotein from
30 the endoplasmic reticulum.

31
32 55. A composition which comprises two or more agents selected from the group
33 consisting of an agent that decreases or inhibits the activity of UDP
34 glucose:glycoprotein glycosyl transferase, an agent that decreases or inhibits activity of